

## **Luke Air Force Base**

### Delisted EPA National Priorities List (NPL) Site

#### **Boundaries:**

The Luke Air Force Base (LAFB) Site (Site) occupies 4,198 acres in Glendale, which is about 13 miles west of downtown Phoenix. There are approximately 4,900 military personnel and dependents living on base. Civilian and other military personnel who commute to the base daily from off-base areas bring the total daily base population to approximately 8,000.



**Tuskegee Memorial Airmen  
Airpark at Luke AFB**

#### **Site Status Update:**

On April 29, 2002, [LAFB](#), the [U.S. Environmental Protection Agency](#) (EPA) and the Arizona Department of Environmental Quality ([ADEQ](#)) announced that LAFB had been [delisted](#) from the [National Priorities List \(NPL\)](#). It was the first active Air Force installation to be delisted from the national Superfund list.

The primary mission of the LAFB Site was to provide advanced flight training to fighter pilots. Discharges and waste disposal practices at LAFB resulted in soil contamination. The Luke Air Force Base site participated in the [Installation Restoration Program \(IRP\)](#), a specially funded program established by the Department of Defense (DoD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DoD facilities. A Federal Facilities Agreement to conduct the site cleanup plan was signed in September 1990.



**Drilling Monitoring Well at Fire  
Training Area -April 2008**

The Air Force has completed all activities necessary to achieve site cleanup completion at Luke AFB. Since cleanup activities began in 1990, the Air Force, with EPA and ADEQ oversight, has treated more than 625 cubic yards of contaminated soil, removed 66,584 gallons of jet fuel from soil that had leaked from [underground storage tanks](#), and monitored groundwater for possible contamination. Cleanup goals specified in [Records of Decision \(RODs\)](#) have been met, institutional controls are in place, and all required reports and records are completed. Only [operations and maintenance](#) activities remain.

New groundwater monitoring wells were installed in April 2008 to replace submerged wells. Long term monitoring of ten IRP sites continues, including the Fire Training Area, Bulk Fuels Storage, Wastewater Treatment Annex Landfill, Oil/ Water Separator Canal and former Liquid Waste Storage facility.

## Community Involvement Activities:

A 30-day public comment period for the delisting ended on March 20, 2002; however, no comments were received.

## Site History:

**1941-1951:** Industrial-type operations started in 1941 and were comparatively small until 1946. After a period of deactivation, the base resumed operations in 1951. During the 1950s, larger quantities of wastes were generated by the expanded maintenance required for the new jet aircraft assigned to the base. At the Waste Treatment Annex (Site No. 2), a small quantity of low-level radioactive electron tubes, believed to be encased in concrete, was buried in a pit 12 feet deep in 1956.

**1951-1973:** The Perimeter Road Petroleum, Oil, and Lubricants (POL) Waste Application Site (Site No. 4) was used during approximately 1951-70. POL wastes were spread on the dirt road around the runway at the western portion of the base. The majority of the wastes consisted of contaminated JP-4 fuel, with some diesel fuel, waste engine oils, and waste solvents. Among the substances that may have been included were [methyl ethyl ketone](#), [trichloroethane](#) (TCA), [trichloroethene](#) (TCE), [toluene](#), [cresylic acid](#), o-[dichlorobenzene](#), phenolic paint strippers, acetone, and paint residues and thinners.

The POL Waste Disposal Trench Site (Site No. 5) was used during about 1970-72. POL wastes were disposed of in numerous trenches approximately 1.5 feet deep and in a shallow lagoon at the northeast corner of the site.

The South Fire Department Training Area (Site No. 6) was used during 1941-46, and again during approximately 1951-63. POL wastes were poured onto old aircraft or simulated aircraft in a cleared, [bermed](#) area and then set on fire.

The North Fire Department Training Area (Site No. 7) was used during approximately 1963-73. The disposal method was similar to Site No. 6.

Thirty-two areas of the base were subject to further investigation: two fire training areas; a waste oil and fuels underground storage tank area; three waste oil disposal trench areas; three surface drainage canals receiving oily wastes; a sewage treatment plant effluent canal; the site of an abandoned Defense Reutilization and Marking Office; thirteen land disposal sites (one of which contains a radiological disposal area); an old incinerator site; a former outside transformer storage site; two leaking underground storage tank sites; an abandoned surface impoundment; an ammunition storage area; a skeet range; and the base production wells.

**1983:** In November 1983, eight water supply wells on the base were sampled as part of IRP. Analysis indicated that two of the wells had low levels of 1,2-[dichloroethane](#) (1,2-DCA) and trans-1,2-[dichloroethene](#) (1,2-DCE). Soil near one of the wells contained 1,2-DCA. An estimated 10,400 people obtain drinking water from base and private wells within three miles of hazardous substances on the base.

**1990:** The Site was placed on the EPA's National Priorities List (NPL) on [August 30, 1990](#).

**1997-2001:** Luke AFB conducted a final potential sources of contamination inspection in August 1997. Also, EPA and ADEQ conducted a final site inspection in April 2000 and determined that the Air Force has constructed the remedy in accordance with the requirements in the RODs for the entire site, and the Remedial Action Work Plans. EPA concurred on the Final Close-Out Report for Luke AFB on April 26, 2001.

**2001:** An Institutional Control Plan dated December 15, 2001 was developed by the Air Force and EPA concurred on the plan on January 8, 2001.

**2002:** The Luke AFB first [Five-Year Review](#) Report was completed, and EPA concurred on the review in January 2002. The Luke AFB was officially deleted from the NPL list on April 22, 2002. However, there are institutional controls which will serve to maintain the current site conditions and will control the risks to human health by prohibiting residential development.



**Drilling new groundwater monitoring well  
at the Fire Training Area**

**2007:** The second five-year review was completed in [June 2007](#).

## **Contaminants:**

Contaminants used on site included organic [solvents](#) and paint strippers, waste oil spills, petroleum spills, metal plating wastes, hydraulic fluids, and radiological wastes. Soil was contaminated with waste oils and [volatile organic compounds](#) (VOCs) resulting from the diverse processes that have taken place at the site. Potential human health hazards included accidental ingestion or direct contact with contaminated materials.

## **Public Health Impact:**

There is no known risk to human health at this time. All exposure pathways have been eliminated through remediation or restricted access/use. No groundwater wells are known to be impacted. There was no cleanup of groundwater required, and the Air Force is continuing long-term groundwater monitoring to assure that it is not impacted in the future. The site is protective of human health and the environment.

## **Site Hydrogeology:**

The base is located within the Sonoran Desert and rests on a broad alluvium-filled valley within the western portion of the Phoenix Basin.

## Contacts:

Name	Phone/Fax	E-mail
Brian Stonebrink, ADEQ Project Manager	(602) 771-4197*/ (602) 771-4272 (fax)	<a href="mailto:bs4@azdeq.gov">bs4@azdeq.gov</a>
Xuan-Mai Tran, EPA Project Manager	(415) 972-3002**/ (415) 947-3518 (fax)	<a href="mailto:tran.xuan-mai@epa.gov">tran.xuan-mai@epa.gov</a>
Viola Cooper, EPA Community Involvement Coordinator	(415) 972-3243** (415) 947-3528 fax	<a href="mailto:cooper.viola@epa.gov">cooper.viola@epa.gov</a>

\*In Arizona, but outside the Phoenix area, call toll-free at (800) 234-5677.

\*\*Call EPA's toll-free message line at (800) 231-3075.

## Information Repository:

Interested parties can review select site documents at the [Glendale Public Library](#), 5959 W. Brown Avenue, Glendale, AZ 85302, (623) 930-3530 or the [Peoria Public Library](#) at 8463 W. Monroe Street, Peoria, AZ 85345, (623) 773-7512.

The complete official site file can be reviewed at the EPA Region 9, [Records Center](#), Mail Stop SFD-7C, 95 Hawthorne Street, Room 403, San Francisco, CA 94105, (415) 536-2000.